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10/527,980

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EXAMINER

HAILEY, PATRICIA L

ART UNIT

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1793

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|---------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/527,980 | Applicant(s) HUBER ET AL. | |
| | Examiner PATRICIA L. HAILEY | Art Unit 1793 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-18 is/are pending in the application.
- 4a) Of the above claim(s) 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-13 and 15-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 28, 2008, has been entered.

Applicants' submission includes an amendment, in which claims 15-18 have been added. No claims have been canceled.

Claims 1-7 and 9-18 are now pending in this application.

Election/Restrictions

2. Claim 14 remains withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected method for light protection or corrosion protection, there being no allowable generic or linking claim.

Claim 14 was withdrawn as a result of an election by original presentation in the previous Office Action.

Claims 1-7, 9-13, and 15-18 are now under consideration by the Examiner.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Applicants' Priority Document was filed on March 15, 2005.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. ***Claim 18 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.***

The subject matter contained in Claim 18 but not described in the Specification is the limitation "such that the LCST and/or UCST polymer does not form a chemical bond with the effect pigments,...".

Applicants have not shown where the Specification shows support for this limitation. Further, the Specification at page 5, lines 13-16 state:

"Preference is given to the use of LCST or UCST polymers containing functional groups which undergo strong interactions and/or form chemical bonds with the effect pigment and the application medium, such as, for example, the coating matrix."

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

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unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-7, 9-13, 15, 16, and 18 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 and 11-14 of copending U. S. Patent Application Publication No. 2007/0166534.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are directed to surface-modified effect pigments based on flake-form substrates, which are sheathed with one or more layers of immobilised LCST and/or UCST polymers, wherein the surface-modified effect pigments are holographic pigments, pearlescent pigments, interference pigments, multilayered pigments, metal-effect pigments, goniochromatic pigments, and/or BiOCl pigments.

The claims in the copending Publication Application are drawn to “substrates with have been surface-modified by means of colorants, characterized in that they are encased with one or more layers of immobilized LCST and/or UCST polymers”, characterized in that the substrates are holographic pigments, pearlescent pigments, interference pigments, multilayered pigments, metal-effect pigments, goniochromatic pigments, and/or BiOCl pigments.

The instant claims and the copending Publication Application claims are structurally similar. Additionally, the limitations of claims 2-7, 9-13, 15, 16, and 18 in the instant application correspond to claims 2-9 and 11-14 of the copending Publication Application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1-3, 9-13, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glausch et al. (U. S. Patent No. 6,176,918) combined with Schauer et al. (U. S. Patent No. 6,686,046).

Glausch et al. teach modified pearl luster pigments for waterborn coating systems, based on platelet-form substrates coated with metal oxides, wherein the coating system consists of a water-based oligomeric silane system. See the Abstract of Glausch et al., as well as col. 1, lines 60-67.

The silane system, which is considered to read upon the limitation "polysiloxane" in **claim 3** (and therefore the limitation "LCST polymer"), is described at col. 2, line 1, to col. 3, line 65 of Glausch et al., as well as col. 6, lines 44-67.

At col. 4, lines 27-40 of Glausch et al., reference is made to “novel pigments for pigmenting coating materials, printing inks, plastics and cosmetics..., for example inorganic and organic absorption pigments, metal-effect pigments and LCP pigments...The substrates used are pigments which consist of a platelet-form material, for example,...titanium dioxide, iron(III) oxide,...” (considered to read upon **claim 9**).

Glausch et al. do not teach or suggest the claim limitations regarding the remaining claimed “LCST and/or UCST polymer”.

Schauer et al. disclose particles provided with a coating of LCST polymers, prepared by dissolving an LCST polymer in a solvent at a temperature below the LCST, mixing the particles with the resulting solution, and raising the temperature of the resulting mixture to, and optionally beyond, the temperature at which the LCST polymer deposits onto the particle surfaces. See col. 1, lines 48-55 of Schauer et al. (considered to read upon **claim 10**), as well as col. 2, lines 21-55, which also discloses that the resultant LCST polymer coating applied to the particles exhibits thicknesses preferably greater than or equal to 50 nm (considered to read upon **claim 2**), and further discloses that the aforementioned coating process “is very preferably carried out such that subsequently to or during formation of the coating the LCST polymer is rendered immobile on the surface of the substrates to be coated therewith”, said immobilizing being rendered either by cross-linking the coating (col. 2, lines 55-60), or by thermodynamically immobilizing the polymer (col. 3, lines 24-32; considered to read upon **claims 16-18**).

Exemplary particles that can be coated include pigments. See col. 1, line 66 to col. 2, line 9 of Schauer et al., which also discloses titanium dioxide and iron oxide as specific examples of pigments.

Note that titanium dioxide and iron oxide are also disclosed in Glausch et al., as discussed above.

The pigments coated by the LCST polymers can be used to produce binder-free pigment pastes containing a carrier medium, preferably water or an organic solvent, which by reason of their freedom from binding agents can be used universally in paints and varnishes. See col. 4, lines 5-17 of Schauer et al. (considered to read upon **claims 12 and 13**).

Examples of the LCST polymers are the same as those recited in Applicants' claim 3. See col. 4, lines 31-40 of Schauer et al.

Schauer et al. at col. 4, lines 18-25 disclose the feasibility in incorporating functional components such as UV stabilizers, chromophores, or luminescent components into the LCST coating. This disclosure is considered to read upon **claim 11**.

Lastly, Schauer et al. at col. 4, lines 28-30 disclose that "coating with LCST polymers may also serve to modify the particle surface..."; this disclosure is considered to read upon the claim limitation "surface-modified".

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Glausch et al. and Schauer et al., by either (1) substituting the pigments of Glausch et al. for the titanium dioxide and iron

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oxide pigments disclosed in Schauer et al., or (2) substituting the coating systems of Glausch et al. with the polymers disclosed in Schauer et al., as the coating system of Glausch et al. and the polymers disclosed in Schauer et al. are viewed as functional equivalents in terms of coatings, and because both have been shown to coat pigments such as titanium dioxide and iron oxide.

12. Claims 1, 4-7, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winter et al. (U. S. Patent No. 5,563,242) in view of Glausch et al. (U. S. Patent No. 6,176,918).

Winter et al. disclose a polymer film composition comprising a base or color coat comprising a binder and an organic pigment or inorganic pigment or mixture thereof, and a clear coat adhering to the base coat. See col. 4 lines 46-51 of Winter et al.

The polymer film may also contain stabilized therein an organic material. Examples of these include polystyrene, poly-(α -methylstyrene), copolymers of styrene or methylstyrene, and polysiloxanes such as polyorganosiloxanes. See col. 6, line 48 to col. 7, line 2, and col. 8, lines 29-32 of Winter et al. (considered to read upon **claims 4 and 5**).

The stabilized polymer composition may also contain from about 0.01 to about 5% of conventional additives such as antioxidants, fillers such as carbon black, and plasticizers. See col. 9, lines 32-37 and col. 12, lines 54-62 of Winter et al. (considered to read upon **claims 6 and 7**).

Winter et al. do not explicitly recite the claimed “surface-modified effect pigments” as recited in claim 1.

Glausch et al. teach modified pearl luster pigments for waterborn coating systems, based on platelet-form substrates coated with metal oxides, wherein the coating system consists of a water-based oligomeric silane system. See the Abstract of Glausch et al., as well as col. 1, lines 60-67.

The silane system, which is considered to read upon the limitation “polysiloxane” in **claim 3** (and therefore the limitation “LCST polymer”), is described at col. 2, line 1, to col. 3, line 65 of Glausch et al., as well as col. 6, lines 44-67.

Note that Winter et al. as discussed above also teaches polysiloxanes.

At col. 4, lines 27-40 of Glausch et al., reference is made to “novel pigments for pigmenting coating materials, printing inks, plastics and cosmetics..., for example inorganic and organic absorption pigments, metal-effect pigments and LCP pigments...”

Because these references disclose common components (polysiloxanes), it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Winter et al. by incorporating therein the pigments disclosed in Glausch et al.

Response to Arguments

In response to Applicants’ arguments that there is no motivation to combine the references, the Examiner respectfully submits that motivation to combine the references is found in the prior art’s teachings regarding coating particles (also described as

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pigments) with polymers corresponding to what Applicants' claim as LCST and UCST polymers.

Although the prior art may disclose chemical bonding between the polymer and the surface upon which it is coated, Applicants' claims in their entirety do not recite the lack of chemical bonding. Further, the prior art's teachings regarding "the above discussed impurities" are not presently excluded from Applicants' claims.

For these reasons, Applicants' arguments are not persuasive.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PATRICIA L. HAILEY whose telephone number is (571)272-1369. The examiner can normally be reached on Mondays-Fridays, from 7:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 1700 Receptionist, whose telephone number is (571) 272-1700.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PATRICIA L. HAILEY/
Examiner, Art Unit 1793
February 12, 2008